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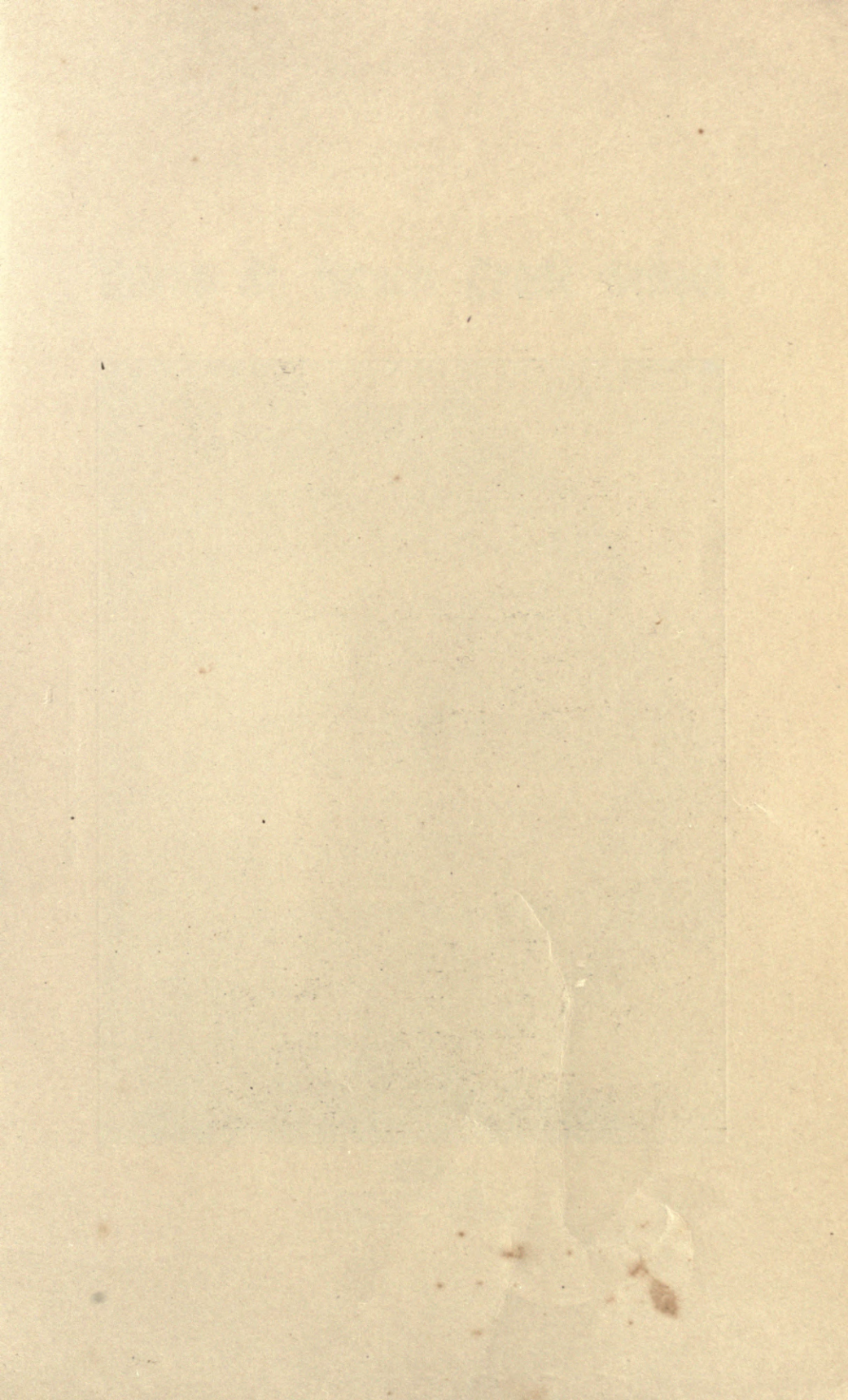
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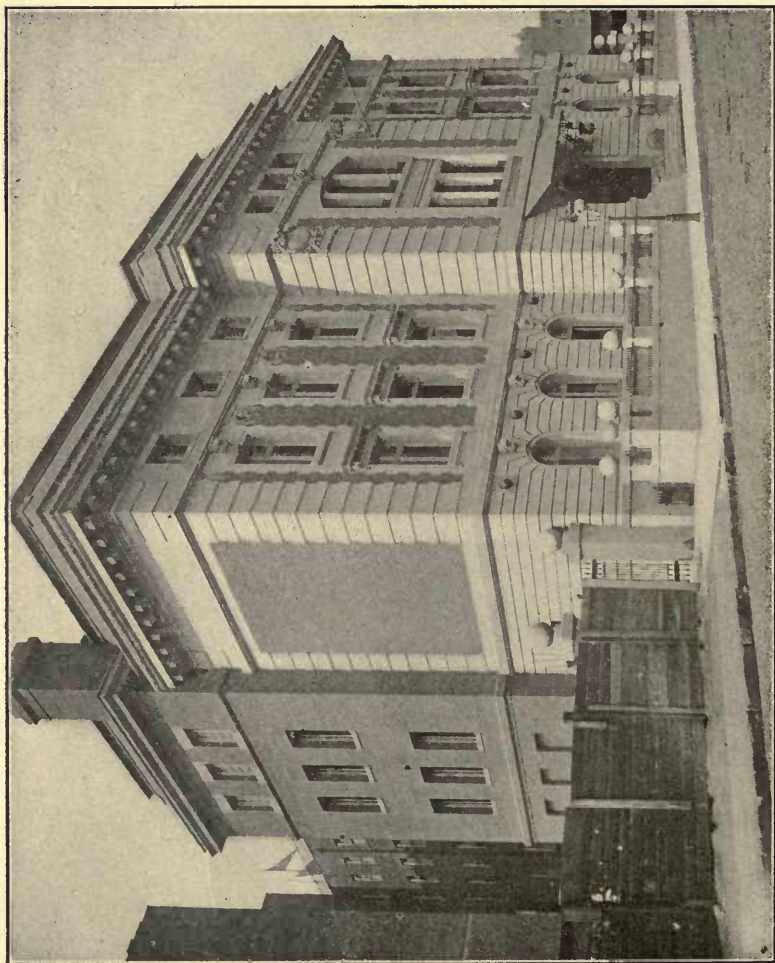
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BARON DE HIRSCH TRADE SCHOOL

222 EAST 64TH STREET
NEW YORK

1906





BARON DE HIRSCH TRADE SCHOOL.

Baron de Hirsch Trade School

222 EAST 64TH STREET
NEW YORK

CATALOGUE



THE HOPP PRESS
370 Eighth Avenue, New York

Baron de Hirsch Fund

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Trade School

SUPERINTENDENT

J. ERNEST G. YALDEN

INSTRUCTORS

MORRIS H. NATANSON,
Fresco, House and Sign Painting Departments
PAUL BALZE, Plumbing Department
ALFRED E. BELL, Electrical Department
JOHN H. SCOTT, Jr., Carpentry Department
KURT STOYE, Machinist Department
EDWARD A. MILLER, Mechanical Drawing and Mathematics

ASSISTANT INSTRUCTORS

WILLIAM SCHUMACHER, Electrical Department
WILLIAM G. KALTENBACH, Plumbing Department

ELIZABETH WELLER, Clerk

COURSES OF INSTRUCTION

Day Classes

TRADES

Machinist Work

Plumbing

House Painting

Electrical Work

Carpentry

Fresco Painting

Sign Painting

Mathematics and Mechanical Drawing

ALL INSTRUCTION IS FREE

OBJECT

The aim of the Baron de Hirsch Trade School is to fit young men in as short a time as possible to obtain employment in one of the mechanical trades as a means of livelihood.

The education of the mechanic may be said to consist of practice and principles. Practice supplies him with that skill and quickness required of the first-class mechanic; and a knowledge of principles, the correct methods of doing work, and a thorough understanding of those methods.

At this time the quickest and best way to acquire sufficient knowledge of a mechanical trade to obtain employment therein, is to attend a Trade School; for there, under competent instructors, a young man is able to learn more of the principles of a trade in six months than he could pick up in a shop in two years, for in a shop there is no one whose special business it is to teach him those principles.

In so acquiring a knowledge of the principles of a trade, he will at the same time get much practice, and on leaving the school and starting to work he will the more rapidly become a first-class mechanic, having started with a proper foundation.

A recent investigation has shown that the average wages paid to young men in New York who are employed in the different occupations open to them without any previous training or preparation, is \$5.39 per week, their average age being about seventeen and a half years. After receiving a five and a half months' course as a special preparation to enter mechanical trades, these same young men earned an average of \$7.54 per week, or a gain of \$2.15, due to their change of occupation, made possible by attending the Trade School.

There is as constant a demand for skilled helpers as for skilled mechanics, and our graduates find little difficulty in securing immediate employment after leaving the school, at wages ranging from \$5.00 to \$15.00 per week, and a prospect of being able to earn journeymen's wages within a year or two.

REQUIREMENTS FOR ADMISSION

Admission to the school is limited to Jewish young men.

Applicants must be able-bodied and at least sixteen years of age.

Applicants must be able to speak, read and write the English language.

Applicants must show that they have some means of support while learning a trade, as nothing in addition to the instruction is provided by the school.

PROBATIONARY PERIOD

All applicants for admission to the classes will be taken on trial for a period of fourteen working days. At the end of this period, if the applicant has shown that he possesses sufficient ability to learn a trade, and has proven himself worthy of acceptance as a pupil, he will be enrolled as a member of the class.

ADMISSION OF PUPILS

Two classes are admitted each year: The first part of February and the middle part of August. In no case will pupils be admitted to a class after three weeks from the date of admission of that class.

As the number of applicants far exceeds the capacity of the school, applications for admission will be received for four months previous to the opening of a class, and pupils will be admitted in the order of their original application.

Application for admission should be made in person to the Superintendent, any morning, but Saturday and Sunday, between the hours of 9 and 10 o'clock.

Application for admission by those living at a distance from New York, may be made by mail.

HOURS OF ATTENDANCE

On Mondays, Tuesdays, Wednesdays and Thursdays the hours are from 8 A. M. until 4.30 P. M., with an intermission of half an hour at noon. On Friday the school closes at 3.30 P. M.

GENERAL REGULATIONS

Pupils are required to be present every school day, unless excused by the Superintendent.

Pupils wishing to be excused from attendance must notify their instructor.

A pupil being absent without having notified his instructor of his intention to do so must bring a written excuse, or explain cause of absence to the Superintendent.

Pupils must be prompt in attendance.

Any pupil changing his place of residence must notify the Superintendent.

Pupils failing to abide by the rules and regulations of the school will be promptly dismissed.

SYSTEM OF INSTRUCTION

Applicants will be assigned to whatever course they seem best adapted, due regard being given to their own inclination as to the trade they wish to learn.

Each of the courses offered takes five and one-half months for its completion, and no certificate will be given to any pupil who does not remain throughout the entire course.

The aim of each of the courses is to give the pupil a sufficient practical working knowledge of a trade to enable him to readily secure employment in that trade as a helper, and a proper understanding of the theory of the trade to prepare him for certain and rapid advancement to the grade of journeyman.

To impart this practical working knowledge, each pupil takes some seven hundred hours of shop work.

The instructors are all skilled mechanics of long experience, and all work done is as nearly as possible like the work that will be met with in actual practice.

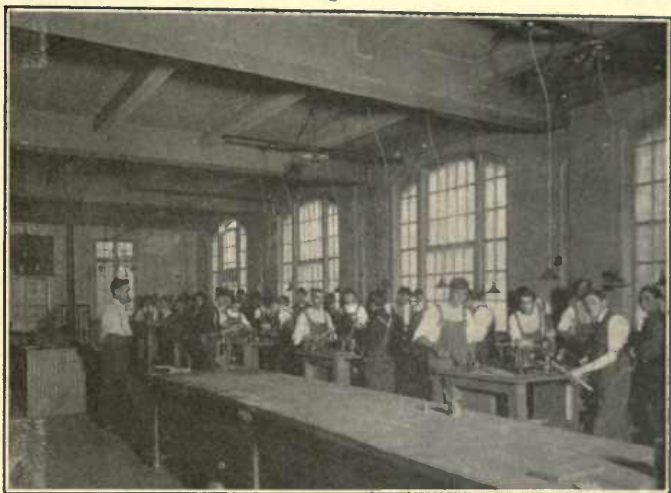
The theoretical side of the trade is taught in frequent lectures and shop talks, and each pupil is required to keep a note-book in which such lectures are to be copied.

All work is, as far as practicable, done from working drawings, and instruction in Mechanical Drawing is given to enable pupils to read and work understandingly from such drawings.

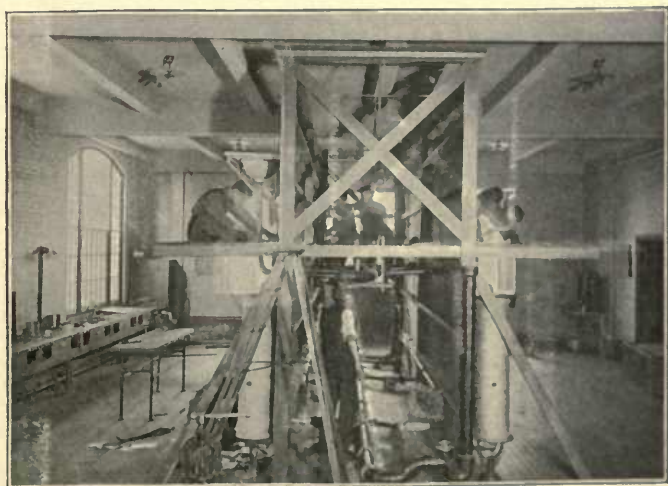
All pupils are required to devote three hours per week to shop mathematics. The course includes instruction in shop arithmetic and elementary mechanics.

During the term frequent examinations are held to ascertain the pupils' progress, and at the termination of the course an examination is given in both theoretical and practical work.

To each graduate passing these examinations satisfactorily a kit of tools is given, and a certificate stating that he has completed one of the courses offered by the school.



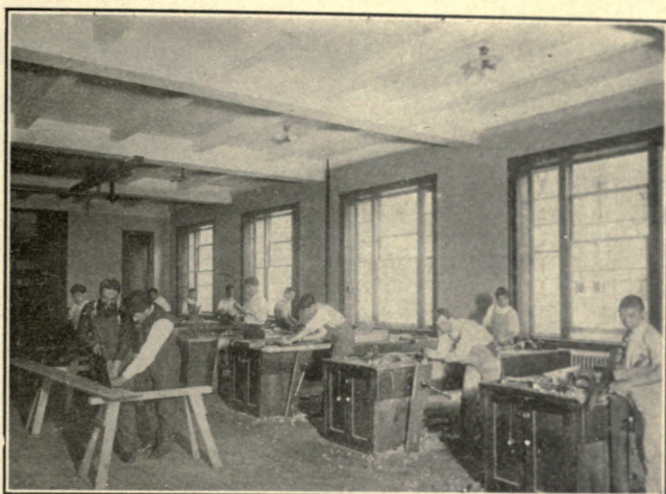
PLUMBING SHOP



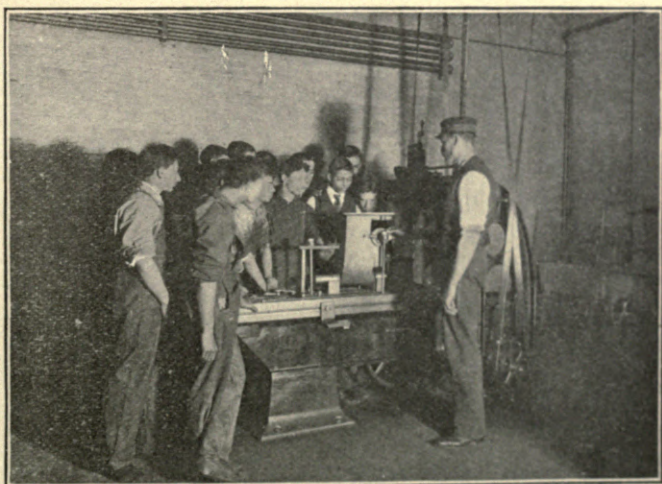
SETTING FIXTURES IN PLUMBING SHOP



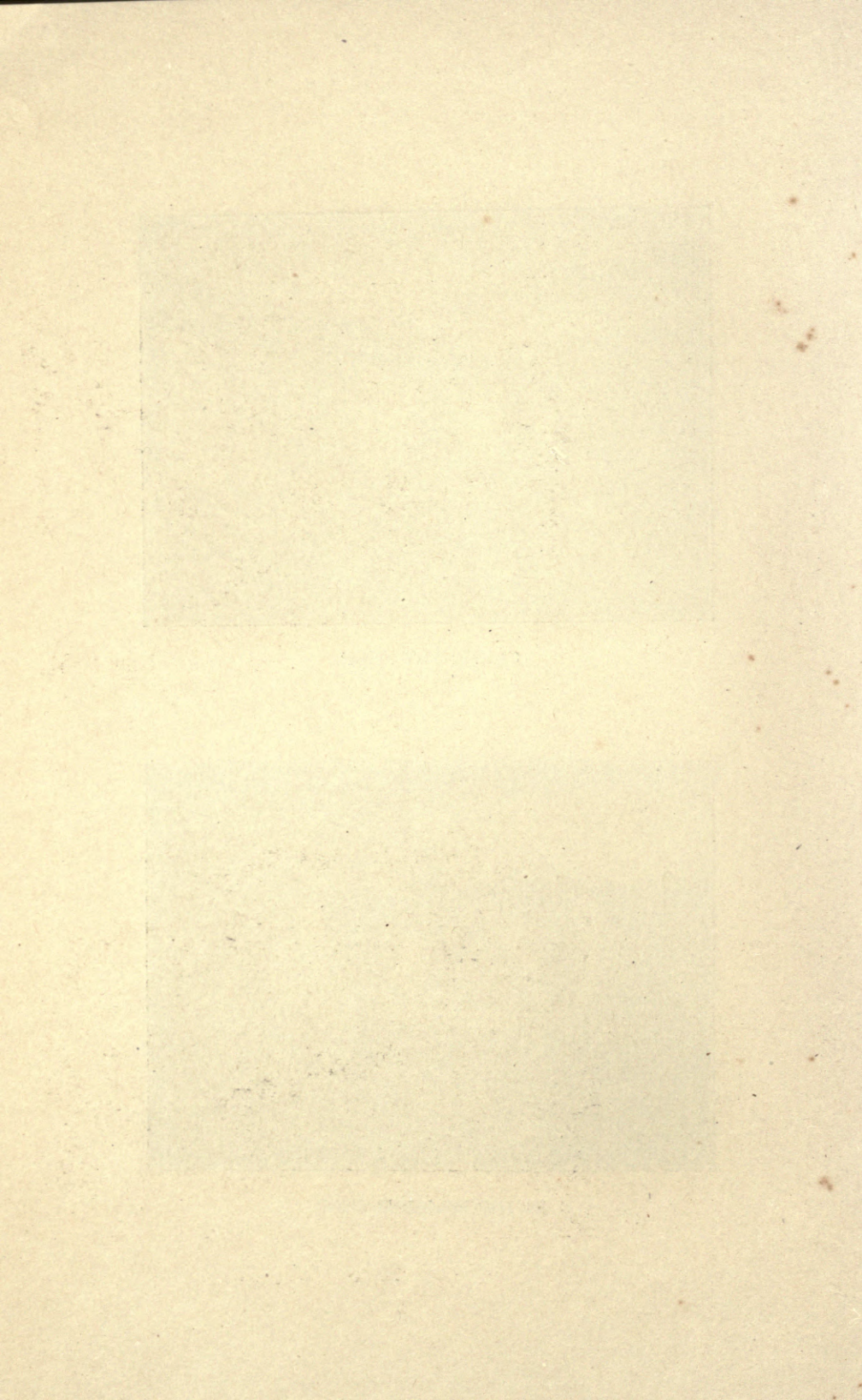
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CARPENTRY SHOP

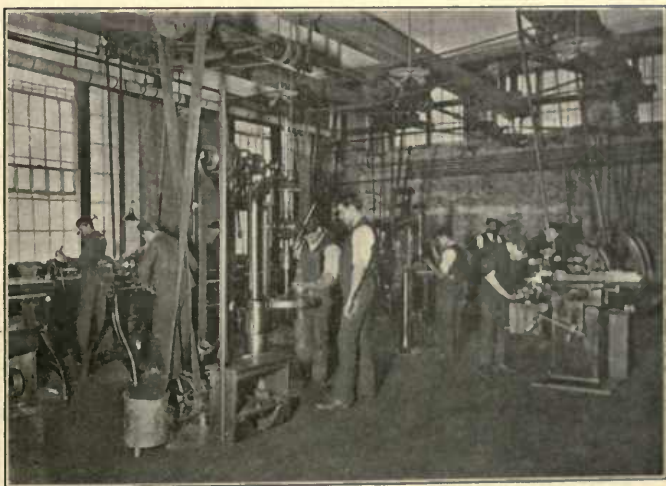


IN THE MACHINE SHOP





MACHINE SHOP



MACHINE SHOP



MACHINISTS' COURSE

The course aims to be comprehensive enough to give the pupil a good grounding in the principles and different practical operations of the trade.

Bench Work.

A number of exercises such as templates, calipers, gauges, tap wrenches, journal boxes, surface plate are completed, showing the operations of chipping, filing, polishing, scraping, laying out, fitting, tapping, threading with stock and die, etc.

Drill Press.

Practice in drilling different kinds of metals, different speeds and feeds, use of different kinds of drills, drill grinding, lubrication, and clamping of work.

Shaper and Planer.

Planing blocks with square and dovetail slides, journal, parallel strips, etc.

Lathe.

Exercises on both speed and engine lathe, such as plug and ring gauges, step gauges, plumb bobs, bell center punch, lathe centers, mandrels, face plates, cutting V and square threads, arbors, ornamental turning showing principles of centering, chucking, speeds and feeds, turning, boring, facing, taper turning, fitting, thread cutting, use of micrometer, hand turning and polishing. Also forging, dressing, tempering and grinding lathe tools.

Screw Machine.

Exercises: Plumb bob, rivets, washers, screws, binding posts, etc., showing use of the machine, the different tools and the setting up of the machine.

Milling Machine.

Exercises: Set screw wrench, chuck jaws, gear cutting and various types of cutters, showing use of different cutters, chucking and clamping, plain, index and spiral milling, and use of universal dividing head.

Universal Grinding Machine.

Exercises in grinding mandrels, lathe centers, milling cutters, gauges and reamers.

In addition to the above mentioned work, a great variety of extra work is made, such as special tools for shop use, and all repairs.

During the latter part of the term complete machines are built by the class. We have built grinders, punch presses, drill presses, gasoline engines, lathes, shapers, etc., and such practical work is a direct application of the fundamental operations learned in the first part of the term, and gives the pupil excellent practice in assembling and construction work.

CARPENTRY COURSE

The first part of the course is devoted to the completion of a number of bench exercises devised to show the use of the different carpenters' tools, and to teach the proper method of handling the same.

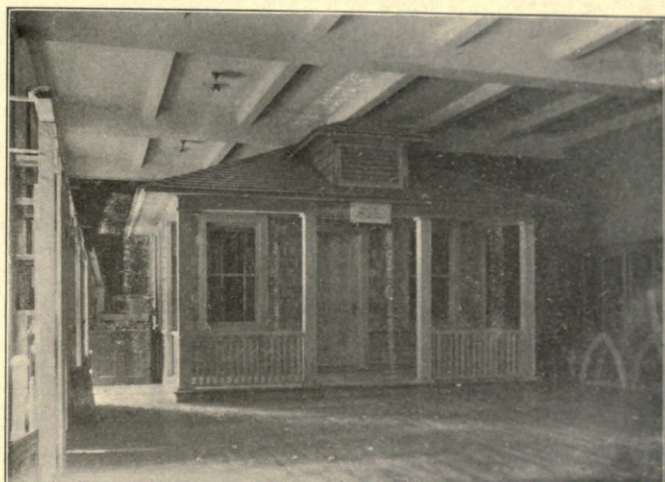
This is followed by a set of exercises showing the principles of joinery, comprising the following joints:

Half-lap, miter, open mortise and tenon, double open mortise and tenon, blind mortise and tenon, through mortise and tenon, half-lap dovetail, sash, door, brace, dowel, slip-tongue, etc.

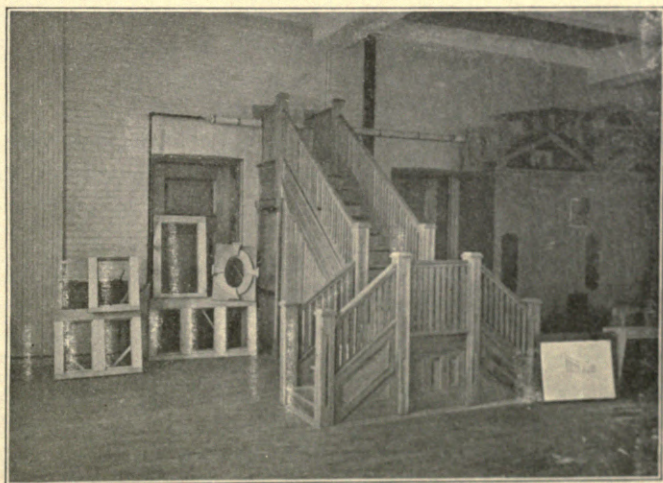
Later the pupils are taught to lay out and construct complete pieces of work, such as frames, tool boxes, small panels of various kinds, window frames, sash, box columns, arch centers, etc. Setting of different kinds of builders' hardware.

Full-size panel doors are made, and set in a partition, showing practical methods of casing, fitting, locking and hanging.

The latter part of the term is devoted to house framing. First each pupil completes a house frame model to scale. This teaches the principles of framing, the laying out and getting out parts of a house frame. The class as a whole then builds a small full-size



COTTAGE BUILT BY THE CARPENTRY CLASS



STAIRWAY BUILT BY THE CARPENTRY CLASS

frame cottage, complete, giving actual practice in framing, sheathing, shingling, partitioning, flooring and setting of all trim.

Blue prints, showing various methods of framing, with the names of the parts of a frame, are given to each pupil and practical examples are worked out by the class showing methods of figuring material in such work.

ELECTRICAL COURSE

The aim of the course is to give the pupil a knowledge of the many problems that occur in bell work, burglar alarm systems, and electric light wiring, and to turn him out a neat and efficient electrical worker.

About two months of the term is devoted to bell work and burglar alarm systems; the remainder to electric light wiring.

Under *Bell Work* about thirty-five exercises are completed. These different exercises are worked out on the walls or ceiling—from floor plans and diagrams, and embrace wiring for different combinations of bells and buttons, door trips, automatic drops, fire alarm, door openers, speaking tube with mail box and door opener, 4 and 6 drop annunciators, wiring and cutting in door and window springs, burglar alarm matting to automatic gong and drop, closed circuit alarm, testing cable, and wiring for intercommunicating systems, and different types of gas-lighting burners.

Lectures are given on the different types of batteries, testing, etc., and each pupil is given blue prints showing standard diagrams for wiring.

This is followed by some thirty practical exercises in Electric Light Work. This includes wire splicing, running wire on porcelain knobs and cleats, in moulding, and connecting up receptacles, sockets, cut-outs, switches, etc., for both two and three-wire systems.

Laying out of different circuits from plans.

Iron and "Greenfield" conduit work, wiring and connecting up all necessary fixtures.

During the term problems in wiring are given, and pupils are shown how to calculate the size of feeders and mains.

Fire Department and Underwriters' rules are fully explained.

At the conclusion of these exercises a complete installation for a lighting system is put in the classroom. A switch board is erected with knife switches controlling the different section panel boards or cut-out boxes, ammeter, voltmeter, voltmeter and ground detector switch.

Lectures and practical notes are given throughout the course to be copied into the pupils' note-books.

PLUMBING COURSE

This course aims to give the pupil a sound working knowledge of the principles and practice of the plumbing and gas-fitting trade.

Lead Work.

Among the first exercises given are: tinning hatchet and straight irons; filing, soiling and tinning brass spuds and ferules; straightening supply pipe, cup joints, casting lead tacks, soldering lead tacks, overcast joints, and lead seams.

This will be followed by a complete set of exercises in joint wiping, comprising horizontal round joints, upright round joints, reducing joints, horizontal branch joints, upright branch joints, flange joints, round joints on brass pipe, etc.

Pupils are now required to make bends of 1½-inch and 2-inch waste, of 4-inch lead soil pipe, and those sufficiently proficient, a grease trap from drawing.

Cast Iron Pipe.

Practice is given in cutting cast iron pipe, twisting oakum, yarning and caulking joints on cast iron pipe, vertical and horizontal.

All such joints must stand an hydraulic test of 60 pounds pressure.

Wrought Iron Pipe.

Description of the tools, fittings, etc., and practice in the making of nipple chucks, nipples, straight and bent drops with straps, offsets, and the handling of large screw pipe.

Gas-fitting.

Toward the latter part of the term the class installs, tests and connects up gas lighting systems with ceiling and side outlets. The taking of measurements, air pump, spring and mercury gauges are fully described.

Plumbing.

The class now installs a house drain, area and leader branches, fresh-air inlets, soil, waste and vent lines in cast iron, common and F. & W. fittings, and wrought iron; sets and connects up range boilers with lead and galvanized iron, water-closets, wash basins, urinals, sinks and laundry tubs.

All this construction work is done from working drawings.

Throughout the term frequent lectures are given on House Drainage and Water Supply, Building Department Rules and Regulations, etc., and notes are given, with necessary diagrams, to be copied into the pupils' note-books.

SIGN PAINTING COURSE

The course includes instruction in the names and uses of sign painters' tools and materials.

The preparation of new boards for lettering, of old signs for relettering, drawing of the different alphabets, spacing of letters and laying out of signs, lettering in one, two and more colors, shading, lettering in gold, silver and bronze, lettering on wood, metal, cloth and glass, and construction of finished signs.

Freehand drawing is taught, and preparation of simple stencils.

HOUSE PAINTERS' COURSE

The course includes instruction in the names and use of house painters' tools and materials.

Practical work as follows: Removal of old paint and kalsomine, cutting out cracks and replastering same, preparation of walls and ceilings for kalsomine, making size, mixing kalsomine colors, kalsomining walls and ceilings. Preparation of surfaces for painting in oil, killing of knots and green spots, sandpapering and puttying, preparation of priming, painting brickwork, wood-work, plaster walls and ceilings, preparation of second and third coats of paint, plain painting and panel work in different shades, flatting, stippling, lining, drawing, cutting, preparing and use of stencils, graining, staining and varnishing. Lectures are given throughout the course explaining methods of mixing colors.

FRESCO PAINTING COURSE

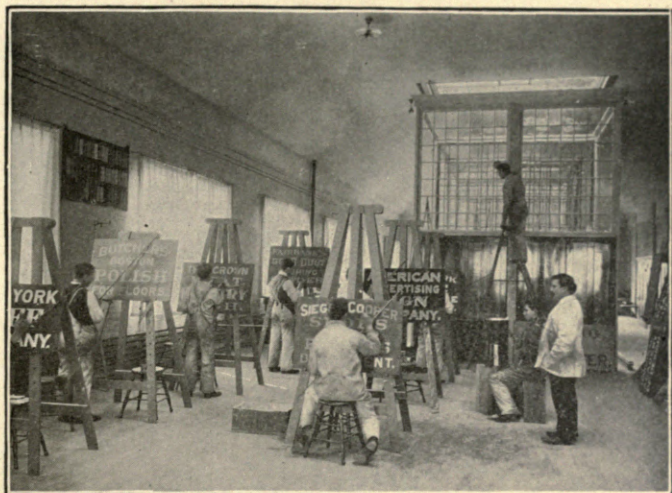
As it is necessary for one to be proficient in plain house painting in order to learn elementary fresco painting, pupils devote about one-half of the term to the house painting course, the latter half of the term is then devoted to obtaining a good foundation for the fresco painters' trade.

The practical instruction, besides practice in plain house painting, includes freehand drawing, drawing and cutting stencils, painting flat and shaded ornaments, and finally full-size designs on walls and ceilings.

MECHANICAL DRAWING COURSE

Instruction in mechanical drawing is given to members of the Carpentry, Machinist, Electrical and Plumbing Departments.

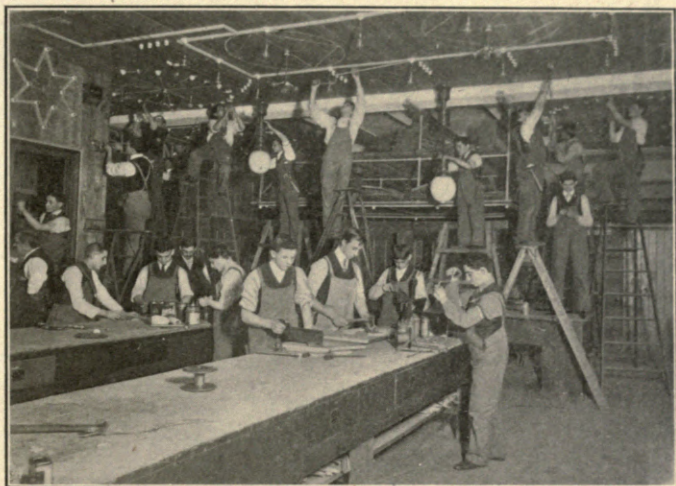
The object of the course is to enable pupils to read working drawings and to understand the principles underlying the laying out of work.



SIGN-PAINTING SHOP



SOME WORK OF THE SIGN-PAINTERS



ELECTRICAL SHOP



ELECTRICAL SHOP

The instruction consists of an elementary course in projection, the making of drawings from models, and from specifications of models.

A series of problems in geometrical drawing are then given to enable pupils to comprehend the principles upon which depend the laying out of work. This is supplemented by a series of more difficult problems, which the pupils are required to solve at home.

The latter part of the course is devoted to making working drawings of objects directly related to the pupils' trade. Such as drawings of the shop exercises and the making of drawings from shop sketches.

MATHEMATICS COURSE

While our pupils upon admission are expected to have a fair knowledge of the fundamental processes of arithmetic, many have left school for some years and are in consequence very deficient in this subject.

To remedy this, all pupils are required to take an elementary course in arithmetic. This embraces a review of the fundamental processes, fractions, decimals and especial attention to mensuration in its application to the different trades.

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